We claim:

1. An optical component comprising a plurality of optical input ports and a plurality of optical output ports, wherein the component comprises:

a substrate arrangement comprising a polymer amplifying medium;

a pump source providing a pump signal for exciting the polymer amplifying medium,

wherein signals passing through the optical component are routed through the polymer amplifying medium.

2. A component as claimed in claim 1, wherein the substrate arrangement comprises a substrate over which a layer of the polymer amplifying medium is provided.

3. A component as claimed in claim 1, wherein the substrate arrangement comprises a substrate formed from the polymer amplifying medium.

4. A component as claimed in claim 1, wherein the substrate arrangement comprises a lens through which all optical input signals are routed.

5. A component as claimed in claim 4, wherein the lens is formed from the polymer amplifying medium.

6. A component as claimed in claim 4, wherein the lens is coated with a layer of the polymer amplifying medium.

7. A component as claimed in claim 1, wherein the substrate arrangement comprises a plurality of lenses, one lens being associated with each input port.

8. A component as claimed in claim 7, wherein each lens is formed from the polymer amplifying medium.

9. A component as claimed in claim 7, wherein each lens is coated with a layer of the polymer amplifying medium.

10. A component as claimed in claim 1 comprising an optical switching array, wherein the substrate arrangement comprises a plurality of reflectors.

11. A component as claimed in claim 10 comprising a micro-electromechanical mirror array, and wherein each mirror is provided with the layer of polymer amplifying medium.

12. A component as claimed in claim 11, wherein different mirrors are provided with different thickness layers.

13. A component as claimed in claim 1 comprising an optical switching array, comprising a first array of micro-electromechanical switches and a second array of micro-electromechanical switches, and wherein the mirrors in each array are provided with a layer of the polymer amplifying medium.

14. A component as claimed in claim 1 comprising an optical switching array, comprising a first array of micro-electromechanical switches which directs light from the input ports to a mirror surface and a second array of micro-electromechanical switches which directs light from the mirror surface to the output ports, wherein a layer of the polymer amplifying medium is provided over the reflective surface.

15. A component as claimed in claim 8, wherein the pump source is arranged to provide pump light to the mirror surface.

16. A method of routing an optical signal using an optical routing component, comprising:

providing the signal from a first input of the component to a reflector;

amplifying the signal by means of a layer of a polymer amplifying medium provided over the reflector;

providing the signal from the reflector to a selected output of the component.

17. A method as claimed in claim 16, wherein the reflector comprises a mirror of a micro-electromechanical mirror array.

18. A method as claimed in claim 16, wherein the signal is provided from the first input to a reflector via a mirror of a first micro-electromechanical mirror array, and the signal is provided from the reflector to the selected output via a mirror of a second micro-electromechanical mirror array.

19. A method of routing an optical signal using an optical routing component, comprising:

providing the signal from a first input to a lens;

amplifying the signal by means of a polymer amplifying medium forming or provided over the lens;

providing the signal from the lens to a reflector;

providing the signal from the reflector to a selected output of the component.